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## **Universities' emerging roles to co-create sustainable innovation paths: some evidences from the Marche Region**

Rural areas are characterised by having a myriad of Small and Medium Enterprises (SMEs) with generally low levels of knowledge, more concerned about day-to-day survival than long-term sustainable development strategies. In order to encourage rural development, multi-stakeholder networks involving Higher Education Institutions (HEIs) have been recognized as the best way to use existent resources and stimulate interaction and knowledge exchange. On the other hand, the presence of heterogeneous stakeholder groups marked by distinctive set of values and ideologies make cooperation in rural areas harder. Given these premises, this paper aims at determining what roles universities can assume in multi-stakeholder networks, in order to support materialisation of sustainable development.

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### **1. Introduction**

As it has been recently underlined by da Rosa Pires et al. (2014), there is growing recognition that, despite the general perception of a decaying and stagnant 'countryside', rural areas are an incredible source of economic, social and cultural innovation: generalisations or prejudices bring often to inaccurate archaic stereotypes. Thus, during the last years, public bodies have been called to recognize the importance of rural areas, and this trend has become particularly relevant during the economic drawback.

Historically, rural areas have been defined as characterized by interconnect-edness, complicatedness, ambiguity, pluralism and social constraints (Lang, 1988), with small and medium enterprises (SMEs) concerned about day-to-day survival strategies (Vernon et al, 2005; Cavicchi et al., 2013). Thus, building partnerships between SMEs is not an easy task: many of them are characterised by uncertain and often contradictory modes of decision making, influenced by heterogeneous stakeholder groups marked by distinctive set of values and ideologies (Holmes, 2002). To overcome these problems, participatory approaches to rural development have been emphasised as the best way to ensure an efficient use of existent rural resources (Murdoch, 2000). Cooperation between research, local government and stakeholders is required to stimulate interaction and knowledge exchange, in order to construct a comprehensive picture of the rural region. This cooperation fosters knowledge flow, allowing policy makers to analyse strengths and weaknesses

as well as opportunities and threats, able to influence potential successful initiatives (Cavicchi et al, 2013).

Given these premises, the presence of Higher Education Institutions (HEIs) and Universities in rural areas is very relevant. This is particularly true in smaller regions, where often universities represent a unique repository of knowledge and “enjoy a position as vital partners necessary for the success of particular policies and projects” (Boucher et al, 2003, p. 890).

Thus, the aim of this contribution is to determine what roles universities can assume in multi-stakeholder networks (HEIs, local governments, businesses and communities) in rural areas, where facilitation and capacity-building represent essential aspects able to contribute to the path towards sustainable development (SD). Therefore, first a literature review on the roles of the universities will be defined, then multiple case studies on different networks located in the Marche region will be presented. Finally, results arising from matching case studies findings and literature on the roles of the universities will be depicted.

## 2. Literature review

Globalisation and the rise of the knowledge economy have posited a new conception of the role of HEIs in the development of the area where they are embedded. International policymakers, such as the OECD and the European Union have put forward the need for universities to create networks with businesses, communities and governments, in order to favour the knowledge flow and knowledge exchange. This issue is particularly relevant in rural regions, characterised by having an economy driven by myriad of SMEs with low levels of knowledge (OECD, 2011). Therefore, networking between rural stakeholders and universities appears to be a sustainable solution to help rural regions dealing with globalisation and knowledge economy requirements.

With the emergence of post-industrial society, “knowledge has become the resource, not one resource” (Drucker, 1993, p. 45). This new framework has called for a reconsideration of the roles of universities and HEIs, particularly in what concerns their contribution to regional, economic, cultural and social development.

As Arbo and Benneworth (2007) note, globalisation is being accompanied by a regionalisation process and HEIs are currently expected to contribute to the development of the territory where they are embedded.

One of the turning points in the evolution of the studies concerning universities’ roles in society was represented by the emergence of the third mission (Etzkowitz, 1998). If universities have been founded on the activities of teaching (first mission) and research (second mission), now the application and exploitation of university knowledge outside academic environments, and the interactions between universities and society came to define the third mission (Molas-Gallart et al, 2002).

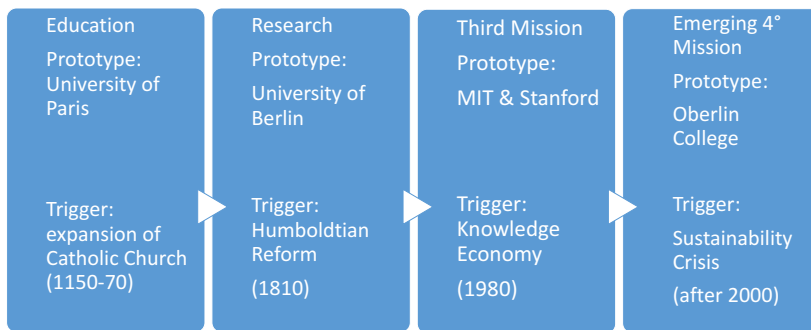
As Trencher et al., (2014a, 2014b) note though, the idea of societal contribution of third mission activities can be mainly assimilated to ‘technology transfer’, ‘the

entrepreneurial university', 'triple-helix partnerships' (Etzkowitz and Leydesdorff, 2000). This means that even though third mission in principle refers to all activities not covered by first and second mission, on the other hand these functions are essentially aimed at contributing to economic development.

This view appears to be too limited while dealing with complex issues such as that of sustainability and SD, that necessarily need to take into account not only economic, but also social, political, cultural and environmental considerations. Sustainable solutions need to be co-created by multiple actors, such as universities, local government, communities, economic stakeholders and civil society. This is why participation is currently seen as a pre-requisite to address SD challenges (Disterheft et al, 2015).

Contributing to sustainability involves an engagement in place-based, multi-stakeholder partnerships able to solve real-world issues (Trencher et al, 2013). Accordingly, Trencher et al. (2013, 2014a, 2014b) indicate the emergence of a new function for universities: that of co-creation for sustainability. This model underlines how some universities are moving from entrepreneurial (Etzkowitz, 1998) to transformative (Figure 1.), conceived as "a multi-stakeholder platform engaged with society in a continual and mutual process of creation and transformation" (Trencher et al, 2014a, pp. 7-8).

Figure 1.



Source: Trencher et al. (2014a).

In their fourth mission (Trencher et al, 2014a), universities collaborate with industry, government and civil society to advance SD. At the same time, sustainability issues need to be dealt with in each context, because challenges and solutions are place-bound and involve different stakeholders able to understand and address them. This is why sustainability is considered as a wicked problem (Batie, 2008).

Wicked problems are issues with innumerable and undefined causes, difficult to frame and understand (Dentoni et al, 2012). Each attempt to look for a solution, in fact, generally changes the problem because there is no agreement between different stakeholders about what the "real" problem is and what are the causes. This happens because sustainability science is rather defined by the problems it

addresses than by the disciplines it involves. This is why the “sustainability science needs to be engaged, since it is stakeholders who will help frame the problem, determine goals, and implement the desired change” (Batie, 2008, p. 1182).

Moreover, unlike tame problems, wicked problems do not have a final solution: starting from a certain situation, each selected solution can be only better or worse or good enough, but never definitive. This is why, in order to deal with wicked problems, it is necessary to constantly manage them (Batie, 2008). Sustainability, in fact, is a long-term endeavour because priorities, ideas and potential actions to be undertaken to pursue SD tend to change over time.

As Disterheft et al. (2015: 12) state: “[p]articipatory approaches can be seen as a requirement, but also as a benefit to the overall paradigm change towards sustainable development and contribute towards the integration of sustainable development into the university culture”.

Sustainability, in fact, “is ultimately a question about how communities at various scales envision and pursue social and natural well-being” (Miller et al, 2014, p. 240). To work towards sustainability entails working with communities to co-create a vision for the future that can then be implemented through different steps (defining a vision and values underpinning it, exploring pathways to realize it, as well as developing institutional structures allowing communities to learn and adapt to new challenges/opportunities) (Miller et al, 2014). In this sense, sustainability scientists can be considered as not simply generators of knowledge but also as change agents (Miller et al, 2011). Co-creation paradigm involves different roles and tools to allow interaction and increase the effectiveness of knowledge exchange between different actors.

Within this context, researchers are called to learn and apply action research methods (Santini, 2013) and participatory approaches (Chevalier and Buckles, 2013). Furthermore, when universities are involved in co-creation processes, also students are called to play a role in network development. It has been noted (Croy & Hall, 2003) how actually student research results could engender better relationships in multi-stakeholder networks as research conduction and presentation is perceived in a neutral manner.

In order to enable students to better understand and contribute to sustainability, there are different effective student-centred learning environments, such as Problem-Based Learning (PBL) and Location-Based Learning (LBL). PBL is a learning methodology located within a social constructionist approach for which process of learning and acquisition of knowledge is socially defined (Vygotsky, 1978). It is an activist-learning methodology student-centred and self-directed, rather than instructor-centric: students’ involvement is a key to develop their understanding of a field, a theory, a skill and so on (Paris, 2011). PBL tenants agree that an educator/facilitator or practitioner presents stimuli of some description. One of the most applied methods in PBL is the seven stage method, which enables the unpacking of the parent problem.

These seven steps are:

- 1: Clarify terms & concepts not readily comprehensible.
- 2: Define the problem.

- 3: Analyse the problem.
  - 4: Draw a systematic inventory of the explanation inferred from Step 3.
  - 5: Formulate learning objectives.
  - 6: Collect additional information outside the group.
  - 7: Synthesise & test the newly acquired information.
- (From Zwaal & Otting, 2010, 21)-

Location-based learning (LBL) can be considered as an extension of PBL. In addition to being student-centred, it also looks for a “more experiential, authentic, flexible and situated learning opportunities for knowledge construction” (Croy, 2009, p. 17). In order to work, relationship between educational institution and destination should be already established and destination should be close to the institution. Geographic closeness could contribute to long-term relationship between students and place: students and facilitators need to have an easy access to place and its stakeholders. On the other hand, destination needs to be cooperative with students and learning institution, otherwise there can only be limited engagement and therefore a limited experience (Croy, 2009).

Moreover, it should be kept in mind that the co-creation paradigm itself recognizes “place” as the main focus to work towards sustainability. Sustainability can be realized in different ways according to specific place and people’s characteristics (stakeholder configurations and so on), as *one-size-fits-all* model does not exist (Trencher, 2014b).

This new framework underlines several emerging roles for universities. Evidently, these roles are also determined by university’s structure and characteristics: as entrepreneurialism and technology transfer features cannot be applied to some smaller or arts and humanities focused universities, in the same way the new co-creation for sustainability function is not necessarily applicable to other kind of universities (Trencher et al, 2014a).

The new roles defined for the co-creation for sustainability paradigm (Trencher et al, 2013) are:

- Scientific advisor/communicator role: university actors aim at influencing local governance structures and development trajectories by disseminating pilot or research projects results and advising an appropriate course of action.
- Inventor/innovator role is divided into two main dimensions: hard dimension, involving creation and diffusion of cutting-edge technologies and innovative ideas and soft dimension, related to how university actors and partners innovate with policies or social entrepreneurialism.
- Revitaliser/retrofitter role: working with external developers and authorities to improve existing buildings, spaces, infrastructures rather than pursuing new development.
- Builder/developer role: new development infrastructure and construction.
- Director/Linker role: academics create a grand vision for the future and seek its materialisation by leveraging other partners’ assets and know-how. They mobilise other actors by creating networks into which they feed intelligence and guidance.

- Facilitator/empowerer role: university attempts to unleash change by empowering key community stakeholders to self-diagnose problems and creating conditions that will lead to a self-realised transformation.

## Materials and methods

In order to define what roles a university involved in multi-stakeholder networks can assume to support stakeholders realizing their objectives in the path towards SD, multiple case studies are presented. The trait-d'union between these

Table 1. Stakeholders engagement, Participatory/experiential methods and their Objectives.

Case study	0.1. Stakeholders	0.2. Participatory/ Experiential method	1. 1.4 Objective
Marche d'Eccellenza	Stakeholders were invited through a call for participation and addressed to all public and private exhibitors participating to the "Tipicità" fair (the most important festival of typical products in Marche region).	<b>Open Space Technology (OST):</b> The goal of an Open Space Technology meeting is to create time and space for people to engage deeply and creatively around issues of concern to them (Owen, 2008).	OST aimed at allowing discussion between different stakeholders. OST generally has a theme or purpose, but not a formal agenda, as relevant themes should arise from stakeholders.
Gastronomic Cities	A first call aimed at inviting stakeholders to participate to local meetings was directly done by the Municipality of Fermo. The first meeting counted around 20 people, but meeting after meeting the number of stakeholders increased thanks to "word-of-mouth". By the end of the project, over 50 stakeholders would regularly attend local meetings.	<b>Visual methods</b> Mind mapping exercises and SWOT analysis were used to allow stakeholders visualising main issues and aspects arising directly from their discussions, and how they could have been categorized and connected.  <b>1.1. Community mapping</b> Mapping is an inexpensive tool that can be used to gather both descriptive and diagnostic information. It can be defined as "groups coming together to draw, mould, write, or express through any other means some aspects of local knowledge and experience" (Amsden & VanWynsberghe, 2005: 360)	Mapping exercises are useful for collecting baseline data on a number of indicators and the process can lay the foundation for community ownership of development planning by including diversely interested groups of people.

case studies is that they all involve the University of Macerata and are located in the Marche region.

The case studies involve multi-stakeholder networks and are aimed at sustainable local development of a particular Municipality or broader area.

The definition of co-creation for sustainability offered by Trencher et al. (2013) is quite loose, as it needs to capture an overall tendency. In particular, co-creation for sustainability is characterized for being place-specific, involving multi-stakeholder partnerships and being able to solve real-world issues. It cannot be specified as per activities that should be carried out, rather as per processes that are put in place and which are aimed at reaching some outcomes that have an impact on the real world. This is why comparing multiple case studies is the methodology that most likely is able to capture and analyse different projects/situations/processes, while deducting common features that help to better shape the co-creation for sustainability function.

Case study	0.1. Stakeholders	0.2. Participatory/ Experiential method	1. 1.4 Objective
Made in Fabriano	Stakeholders were invited directly by a trusted entrepreneur in the Electrical Home Appliance Sector. He used to suggest local gastronomy and touristic attractions to his business contacts: customers and suppliers. Then, after some positive feedbacks, he decided to create an Umbrella brand for the city of Fabriano through a bottom-up approach; the associates are engaged, among other cultural activities, to enhance mutual promotion in international fairs and events, inviting tourists to experience the rural destination of Fabriano. Several meetings have been organised as well as a platform to manage internal relationships among stakeholders and external promotion has been set up.	<b>Location based learning</b> (LBL) is an experiential learning approach. Students had the chance to be provided with a student-centred authentic-experiential learning environment, through meetings with stakeholders, study visits and field trips (Croy, 2009).	Location based learning methods were adopted to enhance the level of collaboration between universities, students and entrepreneurs. Through this cooperation, entrepreneurs could feel more empowered and proud for their daily work. Thus, this kind of pedagogical activity can contribute increasing the feasibility of long lasting and sustainable collaborations

Source: own elaboration

The role of theory in the case study is characterized as “analytic generalization”, in order to underline the difference between this way of generalizing results and that of “statistical generalization”. Of course the case study does not represent a sample, consequently it cannot be generalized statistically. Rather, in case studies the theory helps to define if conditions expressed by it are actually met, or should be extended to add other more relevant explanations (Yin, 2009).

All the case studies should be framed under the action research approach (Cavicchi et al, 2014), aimed at both reducing gap between theory and practice and facilitating knowledge dissemination. Action research aims at stimulating flexibility and responsiveness in research through critical reflection (Dick, 2002).

Different participatory/experiential learning methods have been used in each of the case studies presented, as reported in Table 1: Open Space Technologies, Visual methods, Community mapping, Study visits and Field trips.

## The case studies

### *Marche d'Eccellenza*

Since 2009, Marche d'Eccellenza represented the umbrella-brand attempt aimed at collecting some of the typical products and key features of the Marche region (Cavicchi et al., 2013).

The stakeholders that signed the original agreement (on 12/12/2009), which set the permanent “Marche d'Eccellenza” forum were: the Vice-president of the regional council (in charge of rural policies), the Chancellor of the University of Macerata, the CEO of UBI bank (Banca Popolare di Ancona), the Mayor of Fermo (as a delegate of “Tipicità,” the festival of the Marche’s typical products), and the Unioncamere Marche, representing the Chamber of Commerce. The Forum’s purpose was to explore issues concerning the development of tourism and, more generally, the local economy under a regional umbrella-brand. In this open arena, opportunities and problems related to networks can be analyzed, while new initiatives and strategies are discussed with the main stakeholders.

The University of Macerata is the only HEI in the Marche region that offers tourism courses; therefore, it becomes an important operator in the development of the process of adding value because it can give expertise and it can give opportunities for discussion and brainstorming. Following a preparatory work involving the above-mentioned players, researchers and students of the University, the forum was organized in two different sessions: a plenary session in the morning and three different workshops in the afternoon on themes like “Internationalization”, “Know-how”, and “Place Umbrella-brands.” The workshops were recorded and transcribed verbatim for subsequent analysis (Cavicchi, 2013).

The themes were sorted using a grounded theory approach: following an iterative process, researchers attributed a certain code (e.g. Education), and then reviewed and fine-tuned each code assignment by exploring further materials to include (Lonkila 1995). By examining the different coding together researchers



were able to agree on the definition of the main themes, which emerged from the brainstorming sessions.

The central problem described by Cavicchi et al. (2013) and common to all themes, is the “network building” capability; all the other issues either directly affect this capability, are affected by it, or both. Therefore “Network building” represented the central point where internal and external dimensions converged. Internal dimensions hindering network-building capability are: Marchigianità (identity of Marche people: they love their products and are passionate about it, but different stakeholders do not share their information); Territory (no associations between products and its territory of origin), Lack of Education and training (recognized importance of the university to try to find a common language to jointly face global competition challenges). External dimensions: Globalisation (seen as a threat to local identity) and Outward-facing communication (lack of continuity in communication activities in a globalised world did not increase awareness about the region). All these findings have been widely considered and discussed by stakeholders and while this broad-based project did not lead to a regional umbrella-brand, it did bear fruit in the creation of one of the first multi-sector network contracts in Italy (Rinaldi & Cavicchi, 2016).

Thus, as suggested by Komppula (2014, p. 367) this case evidences that “[t]he best results are achieved in informal co-operation where the convener is some neutral party, such as a university”.

### *Gastronomic Cities*

In 2013 the URBACT secretariat funded a European project, called “Gastronomic Cities”. The aim was to create a brand for cities based on gastronomy. Carried out by five cities working together to create strategies that leverage gastronomy as a tool for urban development, the project was led by Burgos (Spain), which according to the URBACT framework, was considered a “giving” city, because it was the one transferring its best practices to other municipalities of the European Union (“receiving cities”). These were L’Hospitalet (Spain), Alba Iulia (Romania) and Korydallos (Greece) and Fermo (Italy). The University of Macerata (UNIMC), the oldest university in the Marche region, was involved as a key stakeholder, and was represented on the project by the two authors.

Generally, the URBACT programme tries to foster integrated and sustainable urban development through some actions (URBACT, 2013). These include: the facilitation of exchange of experiences and learning among city policy-makers, decision-makers and practitioners, the dissemination of good practices and lessons drawn from these exchanges, ensuring the transfer of know-how, and the assistance to policy-makers and practitioners to define and put into practice Local Action Plans (LAPs) with long term perspectives. LAP represents the final outcome of the whole project: this strategic document addresses the identified needs, analyses problems and puts forward feasible and sustainable solutions. To this purpose, the organisation of basic units of work called Local Support

Groups (ULSGs) is fundamental. Every city partner in an URBACT network has to manage such groups of stakeholders, engaged in order to participate in the development and implementation of urban development policies. Thus, the efficacy of stakeholders' engagement is probably the most critical issue that needs to be addressed and monitored by cities, because bringing together partners to collaborate on a specific topic and to exchange their experiences at transnational level can generate the most innovative results. ULSG activities entail the analysis of local challenges and seeking solutions, embedding the learning from the transnational exchange in the local policy-making process and contributing to the communication of results at local level through a dissemination of learned lessons to the whole local community. Specifically, the Fermo ULSG has been involved in activities at transnational and local level. At transnational level, groups of stakeholders participated since the beginning of the project – in exchange activities, which included peer review exercises, field trip and study visits to facilitate the process of good practice transfer. Through ULSG meetings, stakeholders were able to: understand local strengths and weaknesses; define how to implement the best practice from the giving city of Burgos according to the previous local analysis; foresee activities to be effectively implemented according to the research carried out.

At the local level, several meetings took place starting in February 2014 and ending in November 2014. In each meeting, stakeholders were invited to share their opinion as well as their experience concerning the different activities carried out in the project. After these meetings, the University of Macerata (UNIMC) started to involve students, enrolled in the Master Degree in Planning and Management of Tourism Systems, to collaborate in the development of the LAP. They were divided into five working groups, each comprising five to six students. They had their involvement and learning scaffolded by a previous assessment requiring them to critically evaluate other [gastronomic] city networks and offer to local stakeholders some practical solutions on how to deal with some issues, by the means of the Problem-based learning approach (PBL) (Zwaal & Otting, 2010). PBL was activated under the instruction of a visiting scholar to UNIMC, with experience in the methodology, and expertise in gastronomy studies and food tourism. Students' suggestions were taken into account to prepare the LAP.

The Fermo LAP final document reports activities to be implemented to ensure a local SD based on gastronomy. In order to understand how key stakeholders belonging to the ULSG group perceived the contribution of the University of Macerata concerning the LAP outcome, interviews with four participants have been carried out. Findings reveal that processes enacted by the University's action research approach are leading to an actual co-creation of the "Fermo City of Gastronomy" brand by a multitude of stakeholders, which are facilitated in this experience by the researchers' presence.

Stakeholders put forward that UNIMC contributed helping them shape a common vision for the future, by supporting them building a roadmap of actions to be implemented. One of the participants emphasised that the most important

part of university's involvement consisted in the "awareness empowerment" process, allowing stakeholders to become conscious of their assets (territorial capital) and supporting them identifying common goals to be pursued by leveraging on these assets through a shared strategy.

### *Made in Fabriano*

Fabriano pertains to that part of Italy which is called Terza Italia (Third Italy), the area of Italy that has been the most economically dynamic over the past generation. The Italian sociologist Arnaldo Bagnasco (1977) who first wrote about this model, noted that its industrial structure is largely composed by small, family owned and family-managed enterprises. In this framework, Fabriano could be easily named the real "home" of the Italian appliances industry (the so called white industry), with a large number of small producers included in a small territory and in an industrial system led by a bigger firm, owned by the Merloni family (Barberis, 1987).

Nevertheless during last years, among other factors, economic crisis has contributed to change the environment and local economy is suffering a push toward delocalization. In light of this change, many local entrepreneurs are changing the core of their business and due to the location rich of human and natural capital and food and wine products, some of them are succeeding in promoting Fabriano and the neighbourhoods as a rural destination.

Made in Fabriano is a showcase of the local productive system to the world. The main aim of this association is to disseminate, promote and safeguard industry and culture in the city of Fabriano, both in Italy and worldwide. The first step of this academia is to aggregate over 1700 enterprises, shops and professionals operating in Fabriano in order to connect partners to make Fabriano, its people, culture and products able to face global market challenges. The authors of this paper have been directly involved in several activities of location based learning (LBL) where students had the chance to be provided with a student-centred authentic-experiential learning environment (Croy, 2009). Through the direct and personal contact between students and entrepreneurs, innovative ideas have been generated. The integration of classroom studies with learning gained through productive work experiences in the promotion of "Made in Italy" has fostered the creation of new communication and distribution channels. More specifically, the active participation to a course offered by the University in 2013 and addressed to the second generation of emigrants, whose parents were born in the Marche region, has generated the huge interest of young foreigner participants, fostering their willingness to promote the gastronomic resources of Marche in their home countries. After this course, that had a significant part of teaching based on experiential learning activities, and thus enhancing the relationships between researchers, students, professionals and entrepreneurs involved in such knowledge exchange, it was clear that University can be a relevant body to mobilise other stakeholders by facilitating mutual collaboration.

## Findings and conclusions

Findings reveal several roles the University of Macerata (UNIMC) assumed in the case studies depicted here, assisted by various participatory methods, to support stakeholders addressing their challenges.

The facilitator/empowerer role is the most evident: it allowed stakeholders to reflect on their problems and come out with solutions. This role is supported by evidence in each of the case studies.

UNIMC worked also as an innovator, by supporting sustainable policies creation. In Marche d'Eccellenza, UNIMC has introduced and explained the concept of territorial umbrella-brand and how this concept could have been used to unite heterogeneous stakeholders to face global market challenges and promote a unitary brand for the region, innovating the way stakeholders would deal with such issue. In Gastronomic Cities, different approaches have been used to realise the final outcome. The involvement of students to further investigate problems and individuate solutions with stakeholders can be related to the director/linker role. Director/linker is a role that can be retrieved also in the Marche d'Eccellenza project, as university professors were leading workshops and helped stakeholders to better frame their problems. In the Made in Fabriano experience the ultimate aim is to create a unique grand vision for the huge amount of different stakeholders in order to promote the destination in the global market.

This aspect also links to the scientific advisor/communicator role: in the Made in Fabriano case, several tools (online platform, brochures etc.) have been created to make stakeholders aware of the appropriate course of action that should be undertaken to be successful in the global marketplace.

Concerning the Gastronomic Cities project, students' work can also be attributable to the advisor/communicator role by developing and communicating research project results able to indicate some potential scenarios to stakeholders. In Marche d'Eccellenza, this role was realized by university professors, which not only introduced new concepts to stakeholders, but also helped them to understand how these concepts could have been applied to local needs in order to re-frame issues with new perspectives.

Overall, the findings show that the University of Macerata has been able to manage multiple stakeholders and to leverage interdependencies with local stakeholders. Involving participants, raising issues and discussing with them the implications of applying new concepts, tools and how to make the most out of best practices presentations represent different steps towards the ambitious objective of materialising SD. Through these multiple activities, stakeholders have been able to understand how to start cooperating in a way that could be beneficial to each one of them.

The multiple case studies support the new emerging framework of co-creation for sustainability by meeting the conditions expressed by the theory (analytic generalization) (Yin, 2009).

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